

Then she was served by a Watussi bull and the young one is the result. Also I am enclosing a separate photo of the young one.

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IX.—WHALES IN BARODA, WITH NOTES ON THE
ANATOMY OF THE FIN-WHALE (*BALAENOPTERA*
INDICA) STRANDED AT MULVEL IN MARCH 1939.

Baroda City is somewhat inland, but the State has her seaboard both in Gujarat and Kathiawar: Okhamandal and Kodinar districts in the latter, and Navsari district in the former. The Kathiawar seas receive only a few rivers, like the Singoda or the Gomti, while in Gujarat as many as nine run through Baroda territory before emptying themselves in the Arabian Sea and its arm, the Gulf of Cambay. In these seas whales are not uncommon having been seen spouting, not only from steamers or fishing and other vessels but also from ashore, especially near Dwaraka and Muldwaraka.

The stranding of dead whales is, however, rare; for, so far, there are only three instances of the washing ashore of such carcasses. The earliest on record was in 1879, when a 50 ft. whale came ashore at Dwaraka opposite the Political Officer's Bungalow and very nearly caused a pestilence. In 1883 a baby whale¹ 12 ft. long was cast up on the beach at Varvala near Dwaraka. Both were eventually cut up and buried in the sandy shore. A lot of the blubber was carried away by the Dheds who ate a portion of it and converted the remainder into oil by boiling it down. In 1919 a huge whale 71 feet long was washed ashore near Tithor up the Mahisagar river.

On the 21st March 1939 the pearlfishers working in the various bays near Mulvel in Okhamandal were scared by an amazing scene, a huge *Magar Machi* splashing, spouting and struggling in the Doribid bay. Apparently in its pursuit of food it had been carried along by the treacherous currents for which the Gulf of Cutch is

¹ In the course of a discussion, Mr. Dereniyagala, Director of Fisheries, Ceylon, expressed doubts about the identity of the animal as a whale because of the small size. The old records give the size, and call the animal a whale, but throw no further light on its zoological position.

notorious, till it suddenly found itself in the shallows of the Rann Bay; in its desperate efforts to escape, it became more and more incapacitated by the glairy mud, dangerous even to man, though the favourite haunts of the Placuna Pearl Oyster. It was indeed a ticklish problem to float the huge carcass which had sunk more than half in the mire and the solution involved no little trouble and time. Finally on the 25th the carcass was towed away to Okha by two Motor launches the 'Indira' and the 'Yaswant'. The body bore neither marks of damage nor any harpoon or other evidence of having been hunted. Another whale, which was stranded at about the same time, further south in the Arabian Sea, in the Bardez district of Goa, is said to have borne a harpoon.

Whales, with their pigmy cousins, the dolphins and the porpoises, are generally looked upon by fishermen as helpers in their vocation. For fish, in their terror at the approach of these giants, rush away as if blinded and are easily netted. Sometimes the dolphins damage the nets. When carcasses of these aquatic monsters are washed ashore, villagers usually consider themselves lucky. In South India the belief is otherwise. Ananda Ranga Pillay in his famous Diary refers to a dead fish stranded in Pondicherry in 1757, 160 feet long and also mentions a smaller one 30 feet long driven ashore there 9 years previously and is sure that the giant forebodes disaster much greater than that ushered in when the smaller creature appeared. The Mulvel whale, after being taken to Port Okha, received offerings, floral mostly, from lady visitors who shared the general belief that the *Dev Massa* was the harbinger of prosperity and good luck. At Mulvel where the State is running a Pearl Fishery, the arrival of the whale spelt a loss as it stopped the fishery temporarily. Sharks¹, the terrible scavengers of the sea, gathered round the carcass and naturally the workers refused to go near the oyster beds. This was the main reason why the carcass was towed away to Port Okha where it was auctioned. As the whale was being cut up by the lessee, I availed myself of the opportunity to examine it and the notes and observations made are embodied in this preliminary report. Details regarding musculature, osteology, etc. will be published later.

The Mulvel whale identified as *Balaenoptera indica* measured 79 feet in length and 19 feet across. Its height was 6 feet. The width is more than what it, should correctly be and the height much less, but that is due to postmortem changes. The head measured 18 feet. The flippers were 6 feet long. Each jaw measured 17 feet in length.

A characteristic of the genus is the plaiting of the skin of the throat and the undersurface and sides of the chest. The whale, when dead, usually turns on its back and so the telltale plaits on the throat and belly made identification simple. The dorsal fin which gives the animal its popular name 'the fin whale' was noth-

¹ Among the sharks which came to feast on the whale at Okha, one 11½ feet long was caught and auctioned.

ing but skin and blubber. The tail, which is extended horizontally and vertically had each fluke 9 feet in length. It was also composed of soft parts, skin and blubber. The general colour of the whale was said to be dark grey while the tail, the flippers and the underside were lighter.

The general public thought that the whale 'committed suicide' because she had swallowed treasure or something else equally disagreeable. The common belief is that the whale runs ashore to die, maddened by pain. An ancient rule in Britain makes all whales stranded or captured in the tidal waters the perquisites of the Sovereign, the king claiming the head and the queen the tail. Here the bones and stomach contents were reserved for Government and excluded from the sale. The vast quantity of matter in the inside of the whale created great surprise among the observers. The general idea entertained was that immediately an opening was made the bowels, heart and other organs would be seen. Instead several hours were spent in cutting away the vast masses of flesh below the blubber and the viscera was not reached till later. The apparent hardness felt in the abdomen and which raised the hopes of treasure was because of the gases arising from the whale's last meal. The entrails on exposure disappointed every one and even disgusted those present, for so foul did the contents smell. The stomach contained in its chambers—four could be distinctly made out—mostly unrecognisable matter, but for the ill-digested remains of fish. The intestines were very long and seemed to be full of little pouches.

The purchaser of the carcase bought it for the sake of the oil, which he extracted from the blubber and meat. The blubber was mere tissue, tough and fibrous, but containing a large amount of oil. It invested every part of the whale, but was thicker in some regions like near the back fin. The thin but tough dark skin covered a two-inch layer of yellowish-white fat beneath which lay the fibrous-textured blubber and then the reddish muscular tissue. Ligaments and tendons were broad and flat and yellowish-white in colour. While at Mulvel, volumes of blood were spouted up and the water all round about dyed red. Later, as the carcase was towed from Mulvel to Port Okha, a matter of 15 miles, it left a trail of blood and fat. The heart was a ponderous mass of flesh which quite filled a large drum. Blood-vessels were found to break up into 'retiamirabilia'. The brain was a huge mass, the cerebral hemispheres being much convoluted. It filled a bucket and weighed 7 lbs. There were 15 pairs of ribs the longest having the curvature measuring $15\frac{1}{2}$ feet. The vertebrae totalled 63 and in the hinder part of the body had cartilaginous cushions between them. Two small curved bones were found embedded in the flesh near the reproductive opening; these apparently represent the pelvis. The specimen was apparently a female.

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